XIX. *Description of a new Genus of Plants belonging to the Order Nymphæaceæ: in a Letter to H. T. Colebrooke, Esq., F.R.S., F.L.S. By Nathaniel Wallich, M.D., F.L.S., F.R.S. Ed., &c.*

Read May 1, 1827.

BARCLAYA*. *Wall.*

Linn. Syst. *Polyandria Polygynia.*

Ordo Nat. *Nymphæaceæ.* Trib. 2. *Decand. Syst. Nat.* ii. *p.* 48.

Char. Gen. *Sepala* quinque distincta, infra ovarium thalamo inserta. *Torus* basi in ovarium globosum ampliatus; inde tubulosus, corollaceus, staminiferus, fauce 8—10-lobâ, lobis inæqualiter bi- v. tri-serialibus, conniventibus. *Stamina* plurima, nutantia, tubo tori intùs adfixa eodemque inclusa; superiora sterilia, ramosa. *Antheræ* nudæ. *Styli* plures fundo tubi radiatim inserti, supra foveam verticis ovarii conniventes, basi connati. *Bacca* carnosa, globosa, calyce suffulta corollâque coronata persistentibus, multilocularis, polysperma. *Semina* globosa, setis carnosis obtecta, albuminosa, inversa.

Habitus. Herba facie *Potamogetonis*, in aquis stagnantibus pro-

* This very curious and interesting genus I have dedicated to my highly respected friend Robert Barclay, Esq. of Bury Hill, a most worthy benefactor to the science of Botany.

veniens,

veniens, gracilis, foliis perquàm tenuibus, elongatis, oblongis, basi paulò angustatâ cordato-subhastatis, minimè peltatis, penninerviis, fluctuantibus v. natantibus lucidis, subtùs ferrugineis, leviter tomentosis. *Scapi* uniflori, petiolique graciles, longi. *Flores* erecti, glabri, ex viridi livescentes, inodori, sesquipollicares.

Genus a cæteris *Nymphæaceis* valdè distinctum structurâ et formâ foliorum, et florum. Ab *Euryale* differt calyce distincto absolutè hypogyno; a *Nymphæâ* toro supernè corollaceo, tubuloso, ad limbum multilobo, intùs staminifero.

BARCLAYA longifolia. *Wall.*

Tab. XVIII.

Legi in Pegu, prope Rangoon, in aquis stagnantibus, florentem baccisque ferè maturis mense Augusto 1826.

Rhizoma teres, carnosum, semipollicare, vix digitum minimum crassum, album, inodorum, simplex, fibras emittens longas, gracillimas, copiosas, apice fibrillosas; supernè exerens scapos petiolosque numerosos, læves, graciles, pennâ columbinâ vix crassiores, spongioso-carnosos, fuscos, basi albicantes, pedales bipedalesque, forsan longiores, absque squamis bracteisve intermixtis. *Folia* oblonga, utrinque parùm attenuata, obtusa, 8—10-pollicaria, ad medium sesquiunciam v. duas et dimidium pollices lata, marginibus parùm inæqualibus undulata, sub lente denticulis minutis hyalinis notata, basi cordato-subsagittata, lobis omninò liberis, unguicularibus, rotundato-obtusis, ovatis, parùm divaricatis, sinu acutangulo; membranacea, tenuissima, frondes *Ulvæ* vel *Fuci* quodammodò referentia, subdiaphana, ad lucem visa minutissimè punctulata, quasi vesiculosa, suprà atro-viridia, lucida; subtùs opaca, ferruginea, nunc purpurascentia, tomento parco,

parco, farinaceo, facilè solubili conspersa, præcipuè juxta tractus vasorum, costâ gracili, elevatâ, nervisque copiosis, filiformibus, alternantibus, inferioribus suboppositis, sat magnâ e peripheriâ distantiâ bifurcatis, arcuatim anastomosantibus; nervis verò ipsius baseos brevissimis, vix elevatis, obsoletè radiantibus, ita ut folium ipsum nullo modo palminervium dici potest: venis capillaceis remotis, vix elevatis, maximè reticulatis. Vernatione sunt involuta secus margines ambos, in cylindrum utrinque planiusculum, propter nervos decussatim annulatum; folia tenellæ plantæ lineari-oblonga, basi rotundata integra, vel levissimè retusa. *Petiolus* parùm attenuatus, costæ folii absque articulo v. intumescentiâ continuus, ipsâque laminâ bis terve longior. *Scapi* plures, pedales et paulò ultrà, petiolis breviores, iisdemque parùm crassiores, sursùm leviter ampliati, subclavati, omninò ebracteati, apice parùm supra aquæ superficiem elevati, uniflori. *Flos* carnosus, viridis, sesquipollicem longus, diametro ferè biunciali, inodorus, involucro bracteisque destitutus; æstivatione oblongo-cylindricus, quinque-carinatus, apice quinque-cornutus, calyce secus margines sepalorum imbricato involutus. *Sepala* quinque, distincta, imâ basi vix connata, thalami paululùm dilatati continua, stellatim patentissima, lineari-oblonga, apice obtuso nunc concaviusculo vel intùs in lobulum exiguum producto, pollicaria, plana, disco subcarnosa, marginibus membranaceis, parallelis, nunc subrecurvis, integerrimis, lineas quatuor lata, basi leviter contracta, suprà lævissima, pallida, subtùs ferruginea seu purpurascentia, costâ valdè elevatâ, extrorsùm latiore, obtusè carinatâ, in cuspidem ultra apicem sepali integram, liberam productâ, bi- tri- quadri-linearem, verticalem, complanatam, curvam, subfalciformem. *Torus* carnosus, crassiusculus, lævis, lagenæformis, inferiore parte paulò majore, in globum

globum ampliatus cerasum parvum magnitudine æquantem, superficie parùm et irregulariter undulatum, ipsâ substantiâ suâ fovens ovarium, basi sepalis suffultum, vertice abientem in tubum, alteram et breviorem tori partem efficientem, amplum, cylindricum, corollaceum, monophyllum, diametro 5 lineas emetientem, basi vix dilatatum, limbo laxiùs imbricato, obtuso, convexo, ferè clauso, 8—10-lobo: *lobi* triplici serie irregulariter ordinati; *harum series exterior* bi- vel tri-loba lobis linearibus, erectis, distantibus, subadnatis medio tubi, nunc vertici ipsius globi germiniferi insertis; *intermedia* 3—4-loba, lobis reliquis majoribus, oblongis, vel subovatis, basi contractis; *interior v. tertia* uni- v. bi-loba, lanceolata, occulta: *lobulis* planis, carnosis, intùs uti cum tubo (exceptâ hujus basi albidâ) atro-sanguineis, nitidis. *Stamina* plurima, brevissima, libera, tubo intùs quadruplici vel quintuplici serie alternatim inserta, inclusa, transversalia, emarcescentia: *filamenta* subulata, lævia: *antheræ* lineares, vix tertiam lineæ longitudine æquantes, albidæ, nudæ, obtusæ, nutantes, apici filamentorum insertæ, biloculares, utrinque dehiscentes. Præterea series duæ terminales, intra faucem tubi, constantes staminibus reliquis parùm majoribus, sterilibus, subulatis, hamosis, ad medium (curvaturam scilicet) subincrassatis et compressiusculis, apice acutis, deorsumque incurvis, flavis, basi sanguineis. *Ovarium* globosum, majorem infimamque tori partem constituens, vertice intra tubum foveâ infundibuliformi ad centrum usque exsculptum, carnosum, radiatim 12- vel 12-loculare: *loculis* compresso-prismaticis, verticalibus, pulpâ gelatinosâ repletis, maturitate fructûs ferè absorptâ, fortassè in villos istos seminum inspissatâ, in quâ nidulant ovula copiosa, globosa, scrobiculatim punctata, glabra et imberbia, parietibus, *i. e.* septis adfixa, transversalia. *Styli* tot quot loculi, verticem ovarii serie simplici

plici ambientes, basin tubi intùs, a staminibus paululùm remoti, definientes, basinque ejus non solùm, sed et summam ovarii foveam, excepto centro perforato, obtendentes, convergentes, sanguinei, basibus in annulum planum connati, apicibus subadscendentibus, liberis, subulatis, obtusis, flavicantibus. *Stigmata* simplicia, inconspicua, obtusa. *Bacca* sphærica, diametro cerasi magni, lævis, e viridi rufescens, calyce suffulta tuboque corollæ coronata immutatis (emarcescentibus?) 10-locularis, parietibus, septis, axisque dimidiâ parte inferiore carnosis, albidis, crassiusculis; axis verò parte superiore propter foveam terminalem ovarii maturitate contractam perforatâ. *Loculamenta* ferè sicca, v. succo glutinoso parcè donata, seminibus ferè tota repleta. *Semina* valdè copiosa, viridi-fuscescentia, exactissimè globosa, grano sinapeos nigri vix minora, densè obsita et quasi echinata setis v. pilis hyalinis, longiusculis, patentibus, mollissimis, succulentis basi adfixa parietibus lateralibus loculorum, vertice obsoletè umbilicata, setarum fasciculo rectiore densioreque notata. *Integumentum* simplex, tenue, membranaceum. *Albumen* niveum, grumosum, constans globulis grandiusculis, facillimè attritu solubilibus, rotundis. *Embryo* extra albumen positus, intra umbilicum (insertioni seminis oppositum?) ovatus, minimus. (Structura baccæ corrigenda: *Vide infrà*).

The account which I have given above, will, I trust, convey a tolerable idea of this singular, and, as far as my means enable me to judge, new, and hitherto, unnoticed genus. Should it be found defective in perspicuity, I anxiously request it may be kept in mind, that the description was written on the spur of the moment, far away from any, except the most necessary scientific aids,

aids, surrounded by a great variety of novel plants requiring immediate examination, not long after my arrival at Rangoon, and on the very eve of departing on a distant journey to Ava. I believe I have not omitted any thing that is of importance; but in case I have, the accompanying rough sketches of the flower may perhaps serve to supply what is wanting in that respect.

The plant grows in great abundance towards the margins of tanks; it is smooth and slender, not slimy; the root fixed to the bottom; the leaves at first submersed, afterwards floating, exceedingly thin, oblong, cordate, without the slightest tendency to become peltate. I should have observed, that sometimes, though exceedingly rarely, a leaf is to be seen having one or both margins marked with one or two obtuse short lobes, but this circumstance must be viewed in the light of a monstrosity. The flowers are without any beauty; but this defect is amply made up by their very singular structure, widely differing from that of *Nelumbo*, *Nymphæa*, *Euryale*, and *Nuphar;* that is, from any of the members of the order, to which it unquestionably belongs. From *Podophylleæ*, DeCand. the plant is as remote as any of those genera. The flowers are fleshy, smooth and green: the calyx on the outside purplish-green; the raised part within it stained with pink; the rest of a shining sap-green colour without, and deep-red (atro-sanguineous) on the inside.

The above was written yesterday.—To my great delight, a berry which I had placed on my table the night before has ripened fully, and by taking it into my hand it spontaneously separated into two or three pieces along the dissepiments. Each cell is easily separable, consisting of a soft mealy fleshy parenchyma, pinkish-white; the outer margin coated with a thin membrane (which forms the outside of the berry); the inner margin (that which looked toward the axis) oblique above and straight underneath; sides with obliquely-ascending furrows.

The membrane lining the excavation at the top separates spontaneously (the styles remaining attached to it), as well as the tube of the torus; so does also the calyx, remaining attached to the apex of the scape. The character of the genus must therefore be modified in the following manner:

Tubus tori, annulus stylorum (cum membranâ foveam ovarii tegente) et calyx maturitate seorsim decidui. *Bacca* matura delabens in carpella numero loculorum correspondentia, indehiscentia? lateribus obliquè rugoso-sulcatis, carne mollissimo, ferè exsucco, farinaceo-grumoso, ex albo rubicundo.

RANGOON, August 31, 1826.

EXPLANATION OF TAB. XVIII.

Fig. 1. A flower;—natural size.

Fig. 2. Longitudinal view of a flower;—magnified.
a. Apex of the scape.
b. The thalamus. *c.c.c*. Sepals. *d*. Corollaceous torus. *e*. Limb of the same. *f*. Fertile stamens. *g*. Sterile stamens. *h*. Section of the ovarium. *i*. Ovula. *j*. Radii or ducts connecting the stigmata with the cells of the ovarium. *k*. Styles.

Fig. 3. Ovarium with the corollaceous torus removed, and surmounted by the stigmata;—magnified.

Fig. 4. Corollaceous torus separate.

Fig. 5. Fertile stamen.

Fig. 6. Sterile ditto.

Fig. 7. Ovarium divided horizontally, to show the cells;—enlarged.

XX. *Ob-*